



UNITED STATES PATENT AND TRADEMARK OFFICE

ck

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/511,821

05/11/2005

Olaf Gebauer

SC8373/LeA 36,032

8845

34469 7590 08/23/2007

BAYER CROPSCIENCE LP

Patent Department

2 T.W. ALEXANDER DRIVE

RESEARCH TRIANGLE PARK, NC 27709

EXAMINER

MURRAY, JEFFREY H

ART UNIT

PAPER NUMBER

1624

MAIL DATE

DELIVERY MODE

08/23/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|-------------------------------|--------------------------------|--|
| Office Action Summary | Application No. 10/511,821 | Applicant(s) GEBAUER ET AL. | |
| | Examiner Jeffrey H. Murray | Art Unit 1624 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-11 is/are pending in the application.
- 4a) Of the above claim(s) 8, 10 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>6/7/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. This action is in response to a response to a restriction requirement filed on July 30, 2007. Applicants' election of Group I is acknowledged. The applicant has selected their election expressly with traverse. There are five claims pending and two under consideration. Claims 8 and 10-11 are withdrawn from consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention. This is the first action on the merits. The application concerns novel triazolopyrimidines, a process for their preparation and to their use for controlling unwanted microorganisms.

2. The applicants have traversed the restriction and have claimed that a restriction is improper based on Annex B, Part 2 of the PCT Administrative Instructions. Applicant claims according to Example 18, the present invention shows unity of invention and therefore the Claims cannot be restricted as such. This argument has not been found persuasive. Applicant fails to point out in the case of example 18, it states following, "*Since all the claimed compounds are alleged to possess the same utility*, unity is present." (emphasis added). The reference used to break the unity of invention was U.S. Patent No. 5,811,547. This reference is not used as an antimicrobial agent, suggested in the current application but rather as a method of inducing a transition of crystalline state in a crystalline medicinal substance. The use for these compounds in their respective patents is different from each other, therefore the unity of invention is not upheld. The restriction requirement is deemed proper and therefore made FINAL.

Priority

3. Acknowledgment is made of Applicant's claim for foreign priority. This application, 10/511,821, filed May 11, 2005, is a national stage entry of PCT/EP03/03833, filed April 14, 2003, which claims the benefit of foreign priority to GB 0129215.0, filed April 26, 2002.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

5. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.

Art Unit: 1624

- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

6. The use of the trademarks YIELDGARD, KnockOut, Starlink, Bollgard, Nucoton, New Leaf, Roundup Ready, IMI, Liberty Link, STS and Clearfield have been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

7. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any of the errors of which applicant may become aware of in the specification.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1624

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by American Cyanamid et. al., WO 98/046607, which was published on October 22, 1998. The instantly claimed compounds read on Claim 1 of the prior art reference. Whereby Formula I is the same general triazolopyrimidine core with a hydrogen in the 2-position, a halogen in the 5-position, a substituted phenyl in the 6-position and a heterocycle capable of having an additional nitrogen or oxygen directly bonded to it within the heterocycle in the 7-position.
10. Claims 7 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Pees et. al., U.S. Patent No. 6,559,151, which was published on May 6, 2003 and filed on December 12, 2000. The instantly claimed compounds read on Claim 1 of the prior art reference. Whereby Formula I is the same general triazolopyrimidine core with a hydrogen in the 2-position, a halogen in the 5-position, a substituted phenyl in the 6-position and a heterocycle capable of having an additional nitrogen or oxygen directly bonded to it within the heterocycle in the 7-position.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pees et. al. (U.S. Patent No. 5,593,996) in view of American Cyanamid et. al. (WO 98/046607).

The current application recites a variety of specific triazolopyrimidine compounds for antimicrobial activity. In this application there is the presence of triazolopyrimidine core with a hydrogen in the 2-position, a halogen in the 5-position, a substituted phenyl in the 6-position and a heterocycle with an additional nitrogen or oxygen directly bonded to it within the heterocycle in the 7-position.

The published reference Pees et. al. has an identical core structure to the current patent application with one point of diversity. Both the current application and Pees et. al. have a triazolopyrimidine core with a hydrogen in the 2-position, a halogen in the 5-position and a substituted phenyl in the 6-position. Where the application and the

Art Unit: 1624

reference differ is in the 7-position. In Pees et. al., the 7-position cannot be a heterocyclic ring, whereas in the current application the 7-position is a heterocycle attached to the triazolopyrimidine ring by a nitrogen with an additional nitrogen or oxygen directly bonded to it within the heterocycle.

The published reference American Cyanamid et. al. has an identical core structure to the current patent application as well. Both the current application and American Cyanamid et. al. contain a triazolopyrimidine core with a hydrogen at the 2-position, a halogen in the 5-position, a substituted phenyl in the 6-position and generally a heterocycle in the 7-position. Where the application and the reference differ is the distinct teachings of the 7-position. American Cyanamid et. al. teaches a compound in which the 7-position is a heterocycle attached by the nitrogen, whereas the current application teaches the 7-position heterocycle attached by the nitrogen with an additional nitrogen or oxygen directly bonded to it within the heterocycle in the 7-position.

The motivation to combine these references is that both of these references deal with triazolopyrimidine cores that are useful for the same purpose. Both references discuss the use of triazolopyrimidines as useful antimicrobial/antifungal agents and both references are similar not only in their core structures, but also their substituents.

It would have been obvious to one skilled in the arts at the time of the invention to be motivated to alter the heterocycle at the 7-position of the triazolopyrimidine core to be attached by the nitrogen with an additional nitrogen or oxygen directly bonded to it within the heterocycle in the 7-position. Pees et. al. combined with American Cyanamid et. al. shows the necessary teachings that suggest altering the heterocycle at the 7-position of the triazolopyrimidine core to be attached by the nitrogen with an additional nitrogen

Art Unit: 1624

or oxygen directly bonded to it within the heterocycle in the 7-position, and one would have been motivated to perform this substitution to attempt to enhance activity and afford a positive benefit from the replacement.

Double Patenting

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either

Art Unit: 1624

is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 7 and 9 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claim 1 and 3 of U.S. Patent Publication 2004/0157863 in view of Pees et. al. (U.S. Patent No. 5,593,996). Although the conflicting claims are not identical, they are not patentably distinct from each other because Claims 1 and 3 of U.S. Patent Publication 2004/0157863 would have been obvious over the instant claims 7 and 9.

The published reference Gebauer et. al. has an identical core structure to the current patent application with one point of diversity. Both the current application and Gebauer et. al. contain a triazolopyrimidine core with a halogen in the 5-position, a substituted phenyl in the 6-position and a heterocycle with an additional nitrogen or oxygen directly bonded to it within the heterocycle in the 7-position. Where the application and the reference differ is the 2-position. Gebauer et. al. teaches a compound in which the 2-position is attached to a sulfur atom, whereas the current application teaches the 2-position substituted with a hydrogen.

The published reference Pees et. al. also has an identical core structure to the current patent application with one point of diversity. Both the current application and Pees et. al. have a triazolopyrimidine core with a hydrogen in the 2-position, a halogen in

Art Unit: 1624

the 5-position and a substituted phenyl in the 6-position. Where the application and the reference differ is in the 7-position. In Pees et. al., the 7-position cannot be a heterocyclic ring, whereas in the current application the 7-position is a heterocycle attached to the triazolopyrimidine ring by a nitrogen with an additional nitrogen or oxygen directly bonded to it within the heterocycle.

The motivation to combine these references is that both of these references deal with triazolopyrimidine cores that are useful for the same purpose. Both references discuss the use of triazolopyrimidines as useful antimicrobial/antifungal agents and both references are similar not only in their core structures, but also their substituents.

It would have been obvious to one skilled in the arts at the time of the invention to be motivated to replace the sulfur atom at the 2-position of the triazolopyrimidine core with a hydrogen atom. Gebauer et. al. combined with Pees et. al. shows the necessary teachings that suggest replacing the sulfur atom at the 2-position with a hydrogen atom, and one would have been motivated to perform this substitution to attempt to enhance activity and afford a positive benefit from the replacement.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

16. Claims 7 and 9 are rejected.

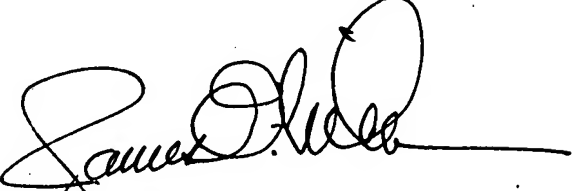
Art Unit: 1624

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey H. Murray whose telephone number is 571-272-9023. The examiner can normally be reached on M-F 7:30-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James O. Wilson can be reached at 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JHM



JAMES O. WILSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600